Reiterative Reflection in the Library Instruction Classroom

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Abstract:

**Purpose:** This essay explores the application of reflective pedagogy within a course-embedded library instruction session (as opposed to a semester-long credit bearing course) as a means to foster transfer learning of research practices.

**Design/methodology/approach:** This conceptual essay adapts theories of reflection for transfer learning as found in Composition and Rhetoric literature to the traditional course-embedded library instruction classroom.

**Findings:** The application of reflection as a structured learning construct may have the potential to transform the library instruction classroom into an environment where transfer learning is more likely to take place.

**Research limitations/implications:** Most models for transfer learning are based on semester-long courses and do not take into account the abbreviated context of the traditional library instruction event. This presents a challenge to any adaptation of theory, as library instruction is often an event isolated to one or a few sessions.

**Practical implications:** Providing a structure for reflective pedagogy for librarians who desire to engage students in practices that offer the potential of fostering transfer learning.

**Originality/value:** Librarians are practicing reflective pedagogies in semester-long information literacy courses, but few have used reflection in traditional instruction sessions beyond the documentation of student learning for assessment purposes. This essay provides a theory that extends reflective pedagogies into the traditional library instruction classroom with the hope of fostering transfer learning.

**Keywords:** Reflection; Transfer Learning, Information Literacy; Library Instruction; Metacognition

**Article Classification:** Conceptual Paper

**Introduction**

When preparing for course-embedded library instruction sessions, librarians face the challenge of designing learning environments that allow students to both build on their former knowledge and imagine new skills in new contexts. Librarians understand that what they are teaching is not isolated to one assignment or one class, or even to...
the ‘college experience.’ Information literacy should transcend those specific contexts and touch the lives of students more holistically. What can librarians do to empower students to learn something in the library instruction classroom and help them transfer that knowledge to other parts of their life? Reflection is frequently offered as a tool to aid in this conundrum. Within the literature, librarians have set the stage to pivot into a deeper exploration of reflective pedagogy. But what is reflective pedagogy and how would its structure look in the library instruction setting? The framework presented within this essay takes into account studies from a variety of other disciplines before extending the conversation into Composition and Rhetoric practices.

Composition and Rhetoric literature has a rich discourse on the theory and praxis of reflection as a pedagogical approach. Precedent has been set for turning to Composition and Rhetoric, as demonstrated by James Elmborg (2006; 2016), Heidi Jacobs (2008), and Emily Drabinski (2017). Therefore, this essay explores the application of reflection as an explicit pedagogy that fosters transfer learning within course-embedded library instruction events using the framework for reflective pedagogy found in Composition and Rhetoric scholarship as a theoretical foundation. Reflective pedagogy found within Composition and Rhetoric as theorized by Kathleen Blake Yancey offers librarians a roadmap for moving beyond simply using reflection to facilitate assessment, and instead using reflection as a learning theory that enables transfer learning within library instruction events. The authors acknowledge the rich value of reflection within the assessment process and assert that employing reflection as a learning theory does not dilute its utility for assessment, but rather adds a stronger exigency for its use. Within this essay, the authors are seeking methods which will allow
them to answer the following questions: How can librarians empower students to learn something in our classroom and help them transfer that knowledge to other parts of their life? What does the praxis of reflective pedagogy look like in the library instruction classroom? And how would reflection operate as a learning theory in the library instruction classroom? Specifically, this essay explores the application of reflective pedagogy within a course-embedded library instruction session (as opposed to a semester-long credit bearing course) as a means to foster transfer learning of research practices.

**Review of Literature**

Most of the library literature on reflection focuses on its utility as an assessment methodology that seeks to document student learning. Megan Oakleaf offers explanation, suggesting “in times of economic crisis, the need to show value is heightened, as evidenced by the recent increase in projects, large and small, dedicated to finding evidence of the worth of academic libraries” (Oakleaf 2011, p.62). It is important to differentiate the documentation of student learning from the use of reflection as a learning theory. Although these two concepts intersect, the former indicates learning happens before reflection takes place, while the latter considers reflection part of the learning process. Oakleaf comments “librarians who embrace reflective practices reap numerous benefits” including benefits in learning (Oakleaf 2011, p.72). She notes that outside of libraries, “some researchers consider learning the major outcome of reflection” (Oakleaf 2011, p.72). Oakleaf acknowledges reflection’s utility in the learning process, but largely focuses on documenting learning as an assessment point in the library’s value portfolio (a necessary measurement in today’s
Likewise, John S. Riddle recognizes that much of the research surrounding library instruction seeks to justify the pedagogical effort spent on the activity by proving learning is happening. In his interrogation of service learning’s impact on the pedagogies of college and university libraries, he notes that reflection is a mode or even an epistemology of learning, and that “it is reflection that binds the twin concepts, service and learning” (Riddle 2003, p.72). Karen Bordoaro and Gillian Richardson use reflection as a learning construct (a frame within which learning can take place) within an information literacy-focused unit in an education course. As one of their major conclusions, they state “reflection plays an important role as well in the learning process...students see the importance of learning both about process and content during the course of their research” (Bordoaro and Richardson 2004, p.398).

Donald L. Gilstrap and Jason Dupree utilize Brookfield’s Critical Incident Questionnaire as a methodological framework for critical reflection, allowing time for students to respond to surveys at the end of each of a three-tiered library instruction series. They report that “responses generated by students consistently seemed to uphold the theory that critical reflection takes place as a result of critical incidents and events” (Gilstrap and Dupree 2008, p.421). Furthermore, they assert that “when evaluating students, using methods that focus on quality in education, critical reflection analysis tends to support why and how learning is taking place as opposed to measuring only learning content” (Gilstrap and Dupree 2008, p.421). Reflection is arguably one of the most valuable qualitative methods of learning assessment that the library has at its disposal.

Some librarians have experimented with using reflection as a component of semester-long information literacy course. Jessica Critten (2015) describes using
reflection in a semester-long information literacy course as a framework that enables students to recognize their own ideological positionality, stating “being critically reflective about one’s personal ideologies that inform structures of research and knowing in the information literacy classroom allows students to see through that false sense of reality and construct a more nuanced and critical understanding of how information is created and to what ends it is used” (Critten 2015, p.147). Derek Stadler and Ian McDermott also report on the use of written reflections in a semester-long information literacy course in order to test the efficacy of instructional technology in a library instruction context. They use an assessment rubric to score three separate artifacts (an assignment, a midterm, and a final exam). Reflection in this instance was not itself analyzed; instead reflection served as a method for gathering data (Stadler and McDermott 2018). It is encouraging to see reflection more deeply explored within the semester-long information literacy context, but this still does not address the challenge of the traditional course-embedded instruction context most librarians find themselves in.

A review of interdisciplinary scholarship on reflection reveals three important points to consider when building reflection into course content: students may not know how to reflect; the importance of scaffolded course content; and the interdisciplinary nature of reflective pedagogy. This third point is especially pertinent to librarians as library instruction is not bound by discipline. In fact, it is important to recognize the multidisciplinary application of reflective pedagogy in order to envision its potential within the library instruction classroom which intersects with a diverse variety of disciplines. Although the scholarship reveals that reflective pedagogy can facilitate
deep and active learning, Mary E. Ryan (2013) asserts that reflection is not something we can assume students know how to do and that “critical reflection is not an intuitive skill” (Ryan 2013, p.154). Similarly, Robert Grossman (2008) points out that when asking students to reflect, it’s often apparent students describe what they think they should be thinking and what their instructors want to hear rather than what they really are thinking. Teaching students how to reflect is not something that can be absent from curricula if reflection is to be used as a way foster transfer learning.

Since reflection is a learned behavior, educators must commit to consistently scaffolding it within their curricula if they want their students to be able to effectively engage. Both Ryan and Grossman acknowledge the importance of structure, frameworks, and scaffolding. Ryan says that, “attempts to include reflection in assessment tasks with little or no pedagogical scaffolding generally results in superficial reflections that have virtually no impact on learning or future practice” (Ryan 2013, p.144). These structures, according to Grossman (2008), “are especially useful for getting students to reflect on course concepts enough to apply them to their lives” (Grossman 2008, p.15). This specifically presents a challenge to librarians conducting single-session library instruction, where there is admittedly little time to develop deep reiterative reflective practices with students. Later, this essay attempts to address this challenge by offering abbreviations suitable for the isolated event of course-embedded library instruction.

Before shifting to the framework for reflective pedagogy found in Composition and Rhetoric, it is useful to briefly examine studies from a variety of disciplinary contexts. Much attention is paid to library instruction within first year writing and within
humanities classes, but reflection has also been demonstrated as a useful construct within STEM, the social sciences, and online classrooms. Sarah E. Summers et al. (2016) assess that using reflection to teach course content in a STEM course encourages students to revisit initial predictions and improve understandings of large course concepts. Nazan Uludag Bautista and Elisabeth E. Schussler (2010) describe their approach to “explicit and reflective (ER) pedagogy” in a Biological Concepts course. This framework includes explicit communication of goals within learning objectives, and the opportunity for students to reflect on their understandings of large course concepts in relation to in-class activities through structured in-class and out-of-class writing prompts and discussions. They describe explicit reflective pedagogy as a “necessary step for achieving scientific literacy for all students” (Bautista and Schussler 2010, p.61). Kathy L. Guthrie and Holly McCracken (2010) discuss reflection in the online environment. Their reflective framework includes three activities: reflection journals, reflective essays, and structured questions to guide online discussion. When assessing student responses as to whether reflection within the class made an impact on their learning, three themes emerged: reflection provides a way for students to feel connected and build community within the online environment, reflection assists in connecting theoretical concepts and its application, and reflection presents students with a new approach to learning.

It is critical to define reflection within the classroom context and articulate goals for adopting such a pedagogy. Reflection is well-theorized within Composition and Rhetoric, thanks to the work of Kathleen Blake Yancey. In her seminal book *Reflection in the Writing Classroom*, Yancey defines reflection as “1) the processes by which we
know what we have accomplished and 2) the products of those processes (eg, as in, “a reflection”)” (Yancey 1998, p.6). Yancey says,

When we reflect, we thus project and review, often putting the projections and the reviews in dialogue with each other, working dialectically as we seek to discover what we know, what we have learned, and what we might understand… reflection, then, is the dialectical process by which we develop and achieve, first, specific goals for learning; second, strategies for reaching those goals; and third, means of determining whether or not we have met those goals (Yancey 1998, p.6).

In other words, it is through reflection that students can begin to make connections within their own experience. Yancey’s theory of reflection is critical to the learning process; discovery through projecting and reviewing allows learners to become aware of their own learning as they are asked to track their knowledge progression, and students demonstrate that they are responsible actors in their own learning when they articulate goals for themselves.

Reflection is an intentional practice that must be cultivated. In order to be pedagogically effective, Yancey suggests reflection needs to be built into the structure of the learning environment and should be practiced regularly throughout the duration of the learning event. Furthermore, Yancey asserts that students must explicitly be told that they are practicing reflection and why. As noted earlier, this presents a challenge to librarians who are attempting to translate this framework to the traditional library instruction classroom context because of the temporal limitations of the library instruction event.
Beaufort (2016) uses metacognition to extend Yancey’s reflection framework in order to demonstrate its capacity to foster transfer learning. In her chapter titled “Reflection: The Metacognitive Move towards Transfer of Learning” Beaufort says:

"Metacognition must be accompanied by a motivation to apply previous knowledge to problem solving in a new situation. And metacognition must not be a reflection only on a task just completed but also on problem-solving tools used for completing the task, including the deep structures of the task or the broad concepts (mental grippers) that provide ways of mapping new information and new tasks using existing knowledge (Beaufort 2016, p.26)."

Often related to the concept of metaliteracy, metacognition is a familiar concept to librarians; it is included in the paratext of the Association of College and Research Libraries Framework for Information Literacy for Higher Education, and has been written about by Booth (2011), Witek and Grettano (2014), Jacobson and Mackey (2017), and others.

Beaufort suggests that instructors shape lessons as "knowledge to go" making direct connections between curriculum, assignments, and discussions to other areas of students' lives. Instructors should also aim to provide multiple opportunities for students to discover connections between course content that on a surface level may not appear similar. Reflection can be used as a tool to get students thinking and writing about these connections as well as “deep structures, broad concepts, and process strategies” not only for an immediate writing task but for future writing assignments. Finally, instructors can “invite application of learning to new tasks, drawing on mental models,
deep-structure knowledge, and inquiry process for learning” (Beaufort 2016, p.26). These four strategies rely on metacognition in order to facilitate transfer learning.

While reflection and metacognition are often included in library instruction discourse, transfer learning is not such a common theme. In their book Writing Across Contexts, Kathleen Blake Yancey, Kara Taczak and Liane Robertson (2014) outline the curriculum they call “Teach for Transfer” (TFT). The structure for the TFT course, designed to be scaffolded, includes:

1. The introduction of key terms or concepts;
2. Readings supporting the writing assignments, including reading in writing theory and readings in reflection;
3. Structured reflection writing through activities and assignments;
4. A reiterative assignment in which students develop a theory of writing throughout the entire semester and which culminates in a final “theory of writing” assignment” (Yancey et al., 2014, p.73).

Similar to Beaufort, Yancey et al. (2014), emphasize the importance of being explicit about the goal of transfer learning for that particular course, session, and/or assignment when communicating to students.

Taczak and Robertson (2016) discuss TFT further in their chapter “Reiterative Reflection in the Twenty-First Century Writing Classroom.” Inspired by Perkins and Salomon (1992), Taczak and Robertson developed a curriculum that incorporates Yancey’s theory of reflection, stating their primary objective as “teach[ing] students to develop as writers so they might be able to transfer knowledge and practices to other academic writing situations” (Taczak and Robertson 2016, p.44). There are a variety of
contexts in which transfer learning can occur. For example, students may be able to take what they learn in academic writing courses into other contexts for writing-- in future assignments, in other courses and disciplines, in other school settings and beyond, into their lives outside of the classroom. Taczak and Robertson recommend three components of reflection: Reflective theory (students learn about reflection); Reflective assignments (students are asked to put reflection into practice); and Reflective activities (students are asked to use one or more of the four “stances” of reflection listed below).

- Looking backward to recall previous knowledge
- Looking inward to review the current situation
- Looking forward to determine how to use knowledge in a new way
- Looking outward to connect identity to a larger context (Taczak and Robertson 2016, p.46).

The TFT course provides a framework for the application of reflection as an explicit pedagogy that fosters transfer learning within course-embedded library instruction events. In order for transfer to take place, Beaufort (2016) describes the three-tiered mental processes of transfer provided by Perkins and Salomon (2012): “the individual must ‘detect’ the possibility of similarities between prior tasks and the current one, then ‘elect’ to be motivated to engage in the comparative thinking necessary for transfer, and finally, ‘connect’ i.e., find a relevant relationship between the initial learning and the transfer situation” (Beaufort 2016, p.25) Reflection, therefore, is one way to facilitate this metacognition. Taczak and Robertson’s findings show that while this curriculum easily facilitates student’s looking backwards and understanding composing in the
moment, students still struggle to critically engage in the practice of writing; in other words, students struggle more with looking forward, which is the heart of transferring knowledge.

**Theorizing Reflection in the Library Instruction Classroom**

The library instruction classroom is a place where students engage in practices (i.e. seeking and gathering information) that facilitate the research and writing process. A major concern for librarians in the classroom is the cultivation of a learning environment that will have an impact on lifelong learning. As indicated by virtually every scholar cited in this essay, reflection is a learned practice that students must be explicitly taught. Yancey, Beaufort, Taczak, and Robertson have theorized and tested reflective pedagogy within the writing classroom, and much of their work can extend into the library instruction classroom. However, their context is within a semester-long course. The context for library instruction is quite different, as librarians may only get to work with students one or maybe two or three times a semester. Yancey’s model requires a robust list of readings intended for engaging students over the duration of a semester. Again, this is not an option for course-embedded library instruction that does not meet throughout an entire semester. How can librarians overcome the obvious challenges of their proposed framework? The following section distills the TFT structure to a model that fits within the context of library instruction. The intention of this framework is best articulated by Kathleen Blake Yancey: “As they learn, they witness their own learning: they show us how they learn. Reflection makes possible a new kind of teaching. The portraits of learning that emerge here point to a new kind of classroom: one that is coherently theorized, interactive, oriented to agency” (Yancey 1998, p.8).
Scaffolding Reflection throughout the Library Instruction Session

Reflective pedagogy is not an isolated activity at a specific time during a library instruction session. Rather, if the desired outcome is engaging students in transfer learning, reflection is something that should be used reiteratively throughout the session. The Teaching for Transfer model of reflective pedagogy calls for a curriculum that structures reflection intentionally, and engages students through explicit instruction on developing a reflective practice. Students should be engaging in different reflective modes throughout the session, reaching backwards, forwards, inwards, and outwards. Librarians can accomplish this by providing key terms related to the session outcomes that help focus students on a collective goal as well as quotes that facilitate reflection. Further, students should also engage in various in-class activities that explicitly introduce them to reflection as a classroom practice within the context of library, such as freewriting, diagramming and mind-mapping, listening and responding to peers through reflective prompts, and responding to prompts. While not as involved as Yancey’s semester-long structure, these actions have the potential to transform the library instruction classroom into an environment where transfer learning is more likely to take place. Ultimately, the goal is to metacognitively engage students in the development of research practices.

Introduction of Key Terms

Yancey et al. suggest using key terms to frame learning events in order to “engage students in both theory and practice” (Yancey et al. 2014, p.73). Key terms in this instance are not search terms, but rather vocabulary words that help students focus on the objectives of the session. Librarians can choose one or two key terms per library
instruction session as a frame for students to use as they progress through exercises. For example, in a session with the learning outcome of narrowing a topic, students can be presented with words such as “Scope” and “Inquiry” along with their contextual definitions. These terms provide context for students as they move through the process of learning to adjust their research topic and give them language to talk about their activities during their work. Likewise, in an introductory searching session, students can be presented with the key terms “Library” and “Information,” signaling to them that their activities focus on the organization of information and the need for outside sources within their writing.

Readings in Reflection

Yancey et al. recommend the use of readings that “support the writing assignments, including readings in writing theory and readings in reflection” (Yancey et al. 2014, p.73). The purpose of these readings is to directly engage students in the practice of reflection by giving them the theory behind the practice. Most librarians would consider this impractical for a single session library instruction event, and perhaps even untenable for a series of library instruction sessions within the same course. An alternative to this task, and one that is more flexible for the context of library instruction, is the presentation of a short quote about reflection at the beginning of a library instruction session. For example, during an introduction to basic searching session, librarians can present students with the quote “Schools are supposed to be stopovers in life, not ends in themselves. The information, skills, understandings they offer are knowledge to go, not just to use on site” (Perkins and Salomon, 2012, p. 248). This quote aligns with Beaufort’s assertion that students engage in transfer learning
when content is packaged as “knowledge to go,” and serves as an entry point for prompts that ask students to think outward and forward. Rather than an exercise that students participate in, both the introduction of key terms and reflection quotes are elements that are introduced at the beginning of a session and used as frames that enhance and guide discussion throughout the session. Since these elements should align with the learning outcomes, they have the potential to help students acquire context surrounding the class content, whether or not the instruction is for a single library session or multiple library sessions.

**Structured Reflection Through Activities**

Beyond providing students with key terms and quotes at the beginning of a library instruction session, librarians also need to explicitly introduce reflection as a part of the session activities. Engaging with quotes or short readings about reflection can certainly provide a starting point for this concept, but students also need to be directly introduced to reflection towards the beginning of the session, and reflective prompts and exercises should be clearly marked. This allows students to draw on what they already know about reflective practices, taking the stance of backwards and inwards, and offer them what Yancey et al. describe as a “passport to help them cross new writing boundaries” (Yancey et al. 2014, p. 76). The following section of this essay goes into more detail about some of the frequently used methods of engaging students in reflection within the library instruction classroom.

**Freewriting**

Freewriting is an activity found in the writing classroom that allows students to spend time putting their thoughts into words in an unfiltered, unedited manner. Typically,
freewriting is unstructured, and students are encouraged to write without paying attention to grammar or syntax, or even completing sentences. The goal of freewriting is to engage students in writing and thinking. Within the library instruction classroom, students can be asked to respond to a loosely-structured prompt such as “spend five minutes writing down everything you can think of about your topic, including things you still have questions about.” Freewrite activities allow students to take any of the four reflective stances. Students are able to respond with what interests them (looking inward and forward) and establish their own theory of their topic; students can explore what they already know as well as what they don’t know about their topic (looking backward and outwards to explore their past experience and their existing knowledge on their topic). Freewriting at the beginning of a library instruction session can help students explore how they think about their topic. At the same time, library instruction can build off of the freewrite throughout the session, connecting content within the freewrite to larger course concepts.

Mind mapping

Beaufort (2016) notes that “reinforcing learning for transfer is not only inviting students to practice skills for one assignment but also inviting them to reflect on what they learned in one task and apply it to a different task” (Beaufort 2016, p.37). Librarians frequently use mind mapping in the instruction classroom because it allows students to organize their approach to a topic ontologically. Mind mapping is a strategy that allows students to diagram their topic, keywords, or other parts of the research. Through this activity, students are able to organize and document their ideas and identify areas of their project that they want to focus on, allowing them to identify scope
and set goals for their project. In other words, students look forward by developing a search strategy and positioning themselves as writers within that topic. At the same time, this activity helps students develop keywords and asks students to look outward; to re-conceptualize keywords from their freewrite and background research and use them in a new context: searching for sources.

Strategizing

Strategy building is a cornerstone of information literacy, and an integral part of reflective pedagogy. As both Beaufort and Yancey suggest, prompts or questions that draw explicit connections between content, research and writing assignments, or even future assignments helps create the environment where transfer learning can occur. In other words, strategizing activities prepare students to begin thinking about how course content can be relevant in other situations. Freewriting and mind mapping can be used as strategizing tools, but students can also reflect using structured prompts that ask them specifically to develop goals and steps to achieve those goals using think, pair, shares or writing prompts. For example, when teaching advanced search strategies, students can respond to a prompt that asks them to look forward to imagine how they would rhetorically employ a source within their writing assignment, connecting research skills to a specific writing assignment. These types of writing prompts can also ask students to think about how the source adds to the scope of their topic as well as the kinds of evidence they need to support their ideas. In other words, asking students to look outward. Reflective prompts that make specific connections between content is also a helpful strategy librarians can utilize when teaching multiple instruction sessions
over the course of a semester. These types of questions serve as a way to connect or build off of previous course content from one session to another.

End of Class Reflection

End of class reflections work best when structured as the culmination of other reflective activities during a session; if a student is asked to reflect at the end of a session without building up to it, they will likely give a vague answer. However, the End of Class Reflection can be a powerful tool to allow students to consider what they have accomplished during a class session, and to make a plan to move forward with their research project. It also gives students the opportunity to voice questions about things they are still unsure of. During end of class reflections, students are asked to look backward and review what they learned in the session. They are also asked to look forward and contextualize what they learned for future research and writing assignments.

Discussion

This essay attempts to adapt Yancey et al., (2014)’s Teaching for Transfer curriculum to the library instruction classroom in order to foster transfer learning. As academic libraries become more involved in the teaching and learning on their campuses, librarians must find ways to help students metacognitively engage in broader information literacy practices. The reflection strategies described above can be applied in a scaffolded manner within a single session, and can be used even more effectively in a series of library instruction sessions (multiple sessions with the same class over the
duration of a semester). The beauty of this proposal for using reflection as a learning construct is that it offers flexibility in its execution.

The theory of reflection as articulated by Yancey et al., (2014) presents several challenges when adapting to the context of the library instruction classroom, but the objective of fostering transfer learning is certainly desirable for librarians. Theories must be tested in order to prove efficacy, and the next step for the authors of this essay is to conduct a study to determine whether this model is capable of providing enough reflective structure to help students begin to think about researching in future contexts. Can key terms and quotes coupled with reflective exercises prepare students to imagine the research they will be engaging in during their next writing unit within the class they are in? In another class this semester? At some point in the future of their college experience? Can students be taught to engage metacognitively to examine their own actions and theorize the results of future actions? These are all questions the authors hope to be able to comment on in the near future. But to quote Beaufort, “Seeing the need for transfer of learning is the first step towards making transfer happen” (Beaufort 2016, p.32). Librarians need a starting point for exploring transfer learning within the limitations that face their specific context.

Conclusion

The theory of reflection has great potential within the library instruction classroom. Librarians frequently engage students in reflective practices, and the literature indicates a high level of interest in the use of reflection as a learning construct. Research across multiple disciplines demonstrate the utility of reflection as a means of engaging students more deeply in the learning process but argue that reflection must be
intentional and structured, and students must be taught to reflect. Yancey et al. offer a
theory of reflection that provides a roadmap for fostering transfer learning within the
writing classroom, which shares many of the same goals and objectives as the library
instruction classroom, but this theory is intended for semester-long application.
Nevertheless, librarians can work to adapt the principles found in Yancey et al. with the
hopes of providing a more meaningful learning experience for students. Librarians have
a history of innovating teaching practices to meet the challenges and limitations of the
library instruction classroom in order to engage students in deep learning. Applying
reflection as a structured learning construct within library instruction classroom (course-
embedded single session and short multi-session series events) may offer librarians a
methodology for accomplishing the kinds of learning that transcend the present,
providing students with a passport to future research contexts.
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